PTO/SB/08 (11.90) at Sheet 1 or 7 29 440

AUG 3 PTO/

INFORMATION INFORMATION APPLICATION								SURI	CITATION	GUI 108	929	929 449				
							PLIC/		N	David J. F	Group Art Unit	aup Art Unit 3308				
						٠			U. S. PATE	NT DOCUMEN	TS	<u> </u>				
EXAMPLER IMTIAL	DOCUMENT NUMBER						. 0	ATE		NAME	CLASS	SUSCLASS	F APP	IQ DATE ROPRIATE		
			Ī	•	T											
	$\top$		Ī		Γ											
	$\top$		Ť	Ť	Ť	Ħ				******						
	$\top$	Ť	$\dagger$	Ť	†	H	十		1							
	+	$\dagger$	†	<del> </del>		H	+-						-			
	+	+	+	╀	╀	∺	+			<u> </u>			<del> </del>			
	+	+	+		$\dashv$	H	+-		<del> </del>				<del> </del>			
	+	_	$\bot$		H	dash	+-							<del></del>		
-	4	+	1		Ц	-	╀-							· ·		
<del></del>	_	<u> </u>	L		Ц	$\bot$	<del> </del>							-a		
					Ш											
									FOREIGN PAT	ENT DOCUME	NTS					
	α	CUL	4EN	TNU	M86	ER	DA	TE	. cour	TRY	Q.488	SUBCLASS	YES	\v0		
					T	T										
		П		$\top$	T	T										
		П	7	1	十	T										
	十	H	+	+	+	十				·		+				
			$\dagger$	+	+	╁	<u> </u>						·			
	<u> </u>		_			ــــــــــــــــــــــــــــــــــــــ			OTHER DOCUM	AENTS (Industrie	Author, Title I	Date, Persinent P	opes Ex	.)		
	7	c.	J	. I	Dar	mie	n a		J. R. Parsons							
0		A I	Re	vie	ew	oí	` Cu	rrer	nt Technology	and Applica	ations",	J. Appl.	Bion	ater.		
														ه زده پردارد		
	$\dashv$	VO.	<u> </u>	<u>د</u>	2	175	, , ,	<u>. u</u>	187-208-							
<del>-/</del>	+															
N						•			alcium Phosph		•					
,	$\perp$	A I	Re	vie	ew'	<u>",</u>	Adv	Der	nt Res, Vol.		ugust 198	38, pp. 1	64-18	0		
MA A	$\frac{1}{2}$					0	ho		i	16 (0/12/9	3					
///	a	10	11	./		1	X/\ (		1	1 1 1 1 1 1 1	,					

PTO/SB/ 08 (11-90)

	AIL A	O S	7			GUI 108		Sheet 2 of 7				
-INFO	RMAT 1992	ÍON V AN	DISC JAPE	PLICATIO	CITATION N	David J. Fink et al.						
1	W. W. W.		Shoots .	if necessary)	U C DA1	TENT DOCUM	ENTE					
EXAMINER INITIAL	DOCU	MENT	MUMBE	R DATE	U. S. FAI	KAME	CLASS	SUSCLASS	RUN	G DATE		
THETTAL			<u> </u>							NOPHIA		
			$\vdash$			<del></del>						
									<u> </u>			
		- :				<del></del>		<del>                                     </del>				
								<del>                                     </del>				
						<del></del>		<del> </del>				
		+	╫	-				-		<del>-</del>		
	+ +	+			1				-	··· <u>·</u>		
<u> </u>	╀╫┼	+								<del></del>		
	- -	╫┤	+-		<del> </del>				-			
	$\sqcup \sqcup$	44	4		ļ			-	-			
	Ш	Ш					145NT0	<u> </u>	<u></u>			
T	DOCUME			DATE	· · · · · · · · · · · · · · · · · · ·	TENT DOCU	MEN IS	SUBCLASS	Transla	non.		
		T	TT						∨E\$	40		
	++	╁┼	$+\!+$									
		╁┼	$+\!+$	-	-					-		
	$+\!\!\!+\!\!\!\!+$	$oxed{+}$	#									
		$\coprod$	#									
		Щ	11	<u> </u>					Name 5:	<u> </u>		
	R.	Z: I	_eGe	ros et a	II., "Signi	Incance of	tudng Autor, 17th, D the Porosit Biodegrad	y and Pr	ysica	I		
105	Anna	nist als	New	<u>or Calci</u> York Ac	um rhospha ademy of S	ciences, Vo	ol. 523, 198	aon <u>-</u> 81 8, pp. 2	268 <b>–</b> 27	<u>. 1</u>		
25	K. I	De (	roo	t et al.	, "Signific um Phospha	cance of th	ne Porosity s Dental an	and Phys d Other	ical Head	and		
40	Necl	k Us 272	ses" 2-27'	, Annals 5	New York	Academy of	Sciences, V	ol. 523,	1988	,		
,3	J. I Cher	E. I mist	Lemoi	ns et al of Calci	., "Signif um Phospha of Sciences	icance of t te Ceramics , Vol. 523,	the Porosity Orthopedi , 1988, pp.	and Phy <u>c Uses''</u> 278 <b>–2</b> 82	rsical Anna	ls		
MAR D	/					DATE COMPOSITED	93					
7/ ~.	ndy					/ ( ) / / / /	7 <					

PTO/SB/ 08 (11-90) Domat Humber (Opensus) Form PTO GUI 108 SCLOSURE CITATION David J. Fink et al. Filing Date Group Art Unit **U. S. PATENT DOCUMENTS** EXAMINER RUNG DATE DOCUMENT NUMBER CLASS SUBCLASS DATE FOREIGN PATENT DOCUMENTS BUSCLASS DOCUMENT NUMBER COUNTRY CLASS DATE VES OTHER DOCUMENTS (Including Author, Title, Date, Persinant Pages, Etc.) K. De Groot, Effect of Porosity and Physicochemical Properties on the Stability, Resorption, and Strength of Calcium Phosphate Ceramics", ىحا Annals New York Academy of Sciences, Vol. 523, 1988, pp. 227-233. E. N. Kaplan, "3-D CT Images for Facial Implant Design and Manufac -705 ture", Clin. Plast. Surg., Vol. 14, No. 4, 1987, pp. 663-676. M. J. Cima et al., "Three Dimensional Printing: Form, Materials, and Performance", Quarterly Report 1991, Proceedings of the Solid Free-87 form Fabrication Symposium, University of Texas, 1991, pp. 187-194. DIAMMER EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP \$ 609; Draw line through

citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

Patent and Trademark Office; U.S.DEPARTMENT OF COMMERCE

PTO/SB/ 08 (11-90) or 7 GUI 108 DISCLOSURE CITATION AN APPLICATION David J. Fink et al. Filing Deta Group Art Unit oral shoots if necessary) **U. S. PATENT DOCUMENTS** EXAMINER IMITAL DOCUMENT NUMBER DATE CLASS SUBCLASS FUNG DATE FOREIGN PATENT DOCUMENTS DOCUMENT NUMBER DATE COUNTRY SUSCLASS 9 OTHER DOCUMENTS (Including Author, Title, Date, Persinent Pages, Etc.) U. Lakshminarayan et al. "Selective Laser Sintering of Ceramic Materials". Proceedings of the Solid Freeform Fabrication Symposium 25 University of Texas, 1990, pp. 16-26 J. W. Barlow et al. "Analysis of Selective Laser Sintering", 1991, NJ pp. 1-5 E. Sachs et al., "Three Dimensional Printing: Ceramic Shells and Cores for Casting and Other Applications". Proceedings of the Second International Conference on Rapid Prototyping, University of Dayton, 1991 N 39-53 DIAMMER DATE COMPOERED EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP \$ 609; Draw line through

citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

PTO	/C D /	ON A	
FIU	201	V0 (	1.40

	This is	100				-	Sheet _	<u>5 or 7</u>	<u> </u>
Form PTO	1449	AUG 3	LOUBE	CITATION	GUI 108		Appresson Number		
INF	Swall State	WENISCH	OSURE ICATION	CITATION N	Approximent David J. Fir				
,	Maion	THE PARTY OF	ecessary)		Filing Date		Group Art Unit		
		·	<del></del>	U. S. PAT	ENT DOCUMENT	13			
EXAMINER	DOCUME	ENT HUMBER	DATE		MAME	CLASS	SUBCLASS	F APPROP	PRIATE
	44	<u> </u>	<u> </u>						
		<u> </u>							
		<u> </u>		<u> </u>					
								-	
				FOREIGN PA	TENT DOCUMEN	NTS			
	DOCUMENT	MIMBER	DATE	œu	NTRY	CLASS	SUBCLASS	Translation	<b>*</b>
		$\prod$							
		1111							
	$\sqcap \sqcap$	1111							•
	7	1111							
		1111							
				OTHER DOCU	JMENTS (Including	Author, Title, Dr	ste, Persinent P	oges, Etc.)	
10	of AL	kshmina 203/P20	rayan e 5 and	et al., "M1 Al203/B203	crostructural Composites Fa	and Mech	ianical i	roperu ctive L	ies asar
21 م	Sinte Unive	ering". I ersity o	Proceed of Texas	dings of the as, 1991, pp	ne Solid Freef 0. 205 <b>-</b> 212	form Fabr	rication	Sympos	sium,
13					ne Art of CT",		Medical	System	ns,
13		·		iterature					
	B. K. Histr	. Miltho	rpe, "	Three Dimen	nsional Recons edings of the	struction	of Biom	aterial	) S
14					oublic of Germ				
XAMMER /	moly.	The	41/	1	OATE COMPERED)	ク			
			. ().	·	on is in conformance		coo Pene li	through	
itation if not it	u coutoum unan n com	Tition course	considere	id. Include copy o	of this form with next	Communication	on to the app	licant	

PTO/SB/ 08 (11-90)

Dealer Humber (Opening Form **GUI 108** MOISCLOSURE CITATION AN APPLICATION David J. Fink et al. Filing Date (Use several sheets if necessary) **U. S. PATENT DOCUMENTS** EXAMINER MUNG DATE SUBCLASS DOCUMENT HUMBER DATE MAME CLASS FOREIGN PATENT DOCUMENTS DOCUMENT NUMBER COUNTRY CLASS BUBCLASS DATE YES OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) M. Erbe et al., "Geometrically Surface Structured Stereolithography Acrylic Resin and Titanium Implants". Proceedings of the Fourth Acrylic Resin and Titanium Imblants" Proceedings of the Fourth World Biomaterials Congress, Berlin, Federal Republic of Germany, April 1992, p. 165

S. J. Bresina, "The Treatment Of Bone Defects", Proceedings of the Fourth World Biomaterials Congress, Berlin, Federal Republic of Germany, April 1992, p. 2007 15 (V 16 Germany, April 1992, p. 207 N T. Truby, "Growing a Human Skull", Med. Equip. Designer, July 1992, pp. M8-10 DAMMER DATE CONSIDERED May audu EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP \$ 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

Pro	RM	ATA MILI	ON ON	DIS AP	CLC PLIC	SURE	CITATION N	GUI 108  Annual David J. Fin				
(Use several sheets of necessary)								Filing Date		Group Art Unit		
							U. S. PAT	ENT DOCUMENT	8			
MENER TIAL	R DOCUMENT NUMBER DATE							NAME	CLASS	SUBCLASS	F APP	O DATE ROPRIATE
		Π				_						<u></u>
				+					<del></del>	<del> </del>		
					$\Box$					1		<del></del>
		+		╁	$\vdash$							<del></del>
_		十		$\dashv$	$\dagger \dagger$					1	<u> </u>	
		十	$\forall$	$\dagger$		<del></del>						
	┤┤	+	H	+	┼┼						-	
			<u> </u>	-			FORFIGN PA	TENT DOCUMEN	TS	<u></u>	i	
	000	JMEN	TNU	MBER		DATE	T	MTRY	CLASS	SUBCLASS	Transi	etren
	T	T		П	十			<del></del>				~
	$\top$	T	$\dagger$	$\dagger \dagger$	十							
$\dashv$	+	H	+	H	+							
	$\dashv$	Н	+	╫	+							
	+	Н	+	H	╫							
				Ц			OTHER DOC!	JMENTS (Including	Author, Title, De	ne, Persinant P	eges, Ek	L : <i>)</i>
	TM	. 1	3ur	ns,	"Iı	ntrod	uction to D	esktop Manufac	turing a	nd Rapid	Prot	totypi
		-					•	lection and Im				
	Ţ	ng	Var	d e	t a	l., "	The Evaluat	ion of Compone	ent Proto	typing a	and Re	everse
5	D	eve	elo	pme	nt a	and E	ngineering	Report to U.S Center, Novemb	er 1990,	pp. 1-3	39.	· · · · · ·
	$\top$	_		_								
<b> </b>	+								•			
	4	_	,		1		- · · · · · · · · · · · · · · · · · · ·	DATE COMMOGRED				
h.	ノ		u u	- }	/ [,	ay	1	10/12/93				